



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

|   |             |                      |                                  |                  |
|---|-------------|----------------------|----------------------------------|------------------|
| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.              | CONFIRMATION NO. |
| 10/565,558  | 06/22/2006  | Mohamed Bouzekri     | 284875US0PCT                     | 2097             |
| 22850 7590 06/10/2009<br>OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.<br>1940 DUKE STREET<br>ALEXANDRIA, VA 22314 |             |                      | EXAMINER<br>VELASQUEZ, VANESSA T |                  |
|   |             |                      | ART UNIT                         | PAPER NUMBER     |
|   |             |                      | 1793                             |                  |
|   |             |                      | NOTIFICATION DATE                | DELIVERY MODE    |
|   |             |                      | 06/10/2009                       | ELECTRONIC       |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

|                              |                                      |  |  |
|------------------------------|--------------------------------------|--|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/565,558 | <b>Applicant(s)</b><br>BOUZEKRI ET AL. |  |
|                              | <b>Examiner</b><br>Vanessa Velasquez | <b>Art Unit</b><br>1793                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11-13 is/are pending in the application.
- 4a) Of the above claim(s) 1,2,6,9,11 and 12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3-5,7,8 and 13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/17/2009</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Status of Claims***

Claim 10 is canceled. Claims 1, 2, 6, 9, 11, and 12 are withdrawn. Claims 3, 4, 5, 7, 8, 13 are presented for examination on the merits.

### ***Status of Previous Rejections under 35 USC § 112***

The previous rejection of claims 3-5 and 13 under the second paragraph of 35 U.S.C. 112 is withdrawn in view of the amendments to the claim.

### ***Information Disclosure Statement***

One (1) information disclosure statement (IDS) was received on March 17, 2009 after the mailing date of the non-final Office action on September 19, 2008. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 3-5, 7, 8, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guelton et al. (US 6,358,338) in view of Kim et al. (WO 93/13233),

Art Unit: 1793

and further in view of Ferguson ("Design for Deformation Processes," Vol. 20, ASM Handbooks Online). The claims remain rejected for the same reasons stated in the Office action dated September 19, 2008.

Regarding the amended portion of claim 3, the impurities in the steel result from smelting (Guelton et al, col. 1, lines 63-65). Therefore, the semifinished steel product of Guelton et al. was produced from a smelted steel.

### ***Response to Arguments***

Applicant's arguments filed February 19, 2009 have been fully considered but they are not persuasive.

First, Applicant argues that the goals and intentions of Guelton et al. are different from the present invention. Applicant acknowledges Guelton et al. teach hot rolling and coiling steps, but that because Guelton et al. does not recognize the same advantages of hot rolling and coiling as does Applicant, Guelton et al. is not applicable to the claimed invention. In response, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). It is well established that "[m]ere recognition of latent properties in the prior art does not render nonobvious an otherwise known invention" (*In re Wiseman*, 596 F.2d 1019, 201 USPQ 658 (CCPA 1979); MPEP § 2145 Section II).

Second, Applicant argues that one of ordinary skill in the art would not combine the allegedly opposite teaching of Guelton et al. (hot rolling) with the teaching of Ferguson (a hold time for refining grain size). In response, Guelton et al. aim to ultimately limit the growth of grains (col. 4, lines 60-65). Thus, combining the teaching of Ferguson (implementation of a hold time to effect static recrystallization after hot deformation) is proper because the delay taught in Ferguson would act to achieve the same goal as Guelton et al., namely, suppression of grain growth.

Third, Applicant argues that Guelton et al. teach away from the claimed process because Guelton et al. allegedly teach that coiling is used to completion the precipitation of carbides, nitrides, and carbonitrides. In response, Applicant has taken the teaching of Guelton et al. out of context. Guelton et al. teach that the completion of precipitation of carbides, nitrides, and carbonitrides "may" (not must) occur (col. 4, lines 27-30). Furthermore, Guelton et al. make clear that the completion of the precipitation of the above compounds is "optionally" executed (col. 4, lines 27-30). Thus, one of ordinary skill in the art seeking to avoid carbides, nitrides, and carbonitrides would not take the opportunity during coiling to precipitate those compounds if they are unwanted.

Fourth, Applicant argues that Guelton et al. discloses the formation of a cold-rolled sheet, not a hot-rolled sheet as claimed. In response, a sheet that has undergone the hot-rolling process of Guelton et al. (col. 3, lines 59-61) is a hot-rolled sheet. Applicant further argues that the sheet of Table 1 (Guelton et al.) is only a cold-rolled sheet. In response, attention is drawn to lines 66-67 of column 4 to lines 1-7 of column 5, which state that the steel sheet of Table 1 is hot-rolled.

Art Unit: 1793

Fifth, Applicant argues that the Mn and Al in Kim is different from the present invention. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The Mn and Al limitations are taught by Guelton et al. (col. 1, lines 56-65). Furthermore, Kim is drawn to the same field as Guelton et al., i.e., methods of heat treating iron-carbon-manganese or high-manganese steels both with relatively small grain sizes (under 40 microns for Kim (abstract) and under 10 microns for Guelton et al. (col. 4, lines 60-61)). Therefore, Kim is pertinent to the technical field and challenges encountered by Guelton et al.

Sixth, Applicant argues that the prior art fails to suggest the claimed coiling temperature of less than 580°C. In response, Guelton et al. does not limit coiling to any particular temperature (col. 4, lines 19-27); thus, the range of "any temperature" would necessarily include a range of "below 580°C". Furthermore, it is well known to one of ordinary skill in the metallurgical arts that grain growth is highly dependent on temperature (Ferguson, p. 5, 4<sup>th</sup> bullet). The desire to reduce internal energy (represented by grain boundary area) is the driving force for grain growth; the more energy (via temperature) supplied to fuel this driving force, the greater the tendency for grains to grow (Ferguson, p. 4, second full paragraph; p. 5, 4<sup>th</sup> bullet). In other words, the higher the temperature, the larger the grains will grow. Thus, taking into account the desire for Guelton et al. to limit grain size, it would have been obvious to one of ordinary

Art Unit: 1793

skill in the art to conduct the coiling step at a temperature that would limit grain growth (i.e., as low as possible for the alloy system therein) in order to maintain refined grains. The determination of this temperature would involve merely routine experimentation by the skilled artisan. MPEP § 2144.05.

Seventh, Applicant argues that the skin-pass operation (cold deformation operation) in Guelton et al. is not applied to a hot-rolled sheet, but rather to a cold-rolled sheet. In response, the cold-rolled sheet was hot-rolled prior to cold rolling (col. 4, lines 66-67 to col. 5, lines 1-7). Therefore, the cold deformation by means of a skin-pass operation was applied to a hot-rolled sheet. In addition, cold deformation is not limited to the skin-pass operation. The hot-rolled sheet is subjected to cold-rolling reduction (cold deformation) of 10-90% (col. 4, lines 31-41). Thus, Guelton et al. still properly reads on the limitation.

Eighth, Applicant argues that Guelton et al. do not teach that the grain size before the last cold rolling and annealing operations is not less than 18 microns. In response, because the composition of the steel and the process of Guelton et al., Kim et al., and Ferguson are substantially similar to the claimed process, any claimed properties, such as grain size, would necessarily be expected to occur.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** No claims are allowable. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 1793

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vanessa Velasquez whose telephone number is 571-270-3587. The examiner can normally be reached on Monday-Friday 9:00 AM-6:00 PM ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King, can be reached at 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 1793

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Roy King/  
Supervisory Patent Examiner, Art  
Unit 1793

/Vanessa Velasquez/  
Examiner, Art Unit 1793